

AMENDMENTS TO THE CLAIMS

1 1. (original) A method of constructing a data pattern comprising:
2 calculating an actual value using selected data of the data pattern;
3 determining a desired value of the actual-value calculation using the selected
4 data;
5 determining a correction value to be applied to a portion of the selected data;
6 performing an operation using the correction value and the portion of the
7 selected data, thereby yielding a replacement value; and
8 making the portion of the selected data equal to the replacement value, thereby
9 yielding adjusted selected data.

1 2. (original) The method of claim 1, wherein:
2 the data pattern comprises a data loop;
3 the desired value is stored in a first frame of the data loop; and
4 the actual value is a function of the content of a preceding frame of the data
5 loop.

1 3. (original) The method of claim 2, wherein the data pattern comprises binary data
2 and the step of determining the correction value comprises performing an exclusive-Or
3 operation of the actual value and the desired value.

1 4. (original) The method of claim 3, wherein the step of performing the operation
2 comprises performing an exclusive-Or operation of the correction value and the portion of the
3 selected data.

1 5. (original) The method of claim 4, wherein the data pattern is used for time-
2 domain testing.

1 6. (original) The method of claim 5, wherein the time-domain testing comprises bit-
2 error-rate testing.

1 7. (original) The method of claim 4, wherein the data pattern is used for frequency-
2 domain testing.

1 8. (original) The method of claim 7, wherein the frequency-domain testing
2 comprises spectrum analysis.

1 9. (original) The method of claim 4, wherein the data pattern comprises at least one
2 Synchronous Optical Network (SONET) frame.

1 10. (original) The method of claim 9, wherein the step of calculating comprises
2 performing a Bit Interlace Parity (BIP) calculation.

1 11. (original) The method of claim 10, wherein:
2 the data pattern comprises at least a last frame and a first frame;
3 the desired value is stored in the first frame;
4 the actual value is calculated on the last frame.

1 12. (original) The method of claim 10, wherein the data pattern comprises a plurality
2 of frames and a plurality of the plurality of frames include identical B bytes.

1 13. (original) The method of claim 11, wherein the last frame and the first frame are
2 the same frame.

1 14. (original) The method of claim 10, wherein the desired value comprises at least
2 one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

1 15. (original) The method of claim 9, wherein the number of frames in the data
2 pattern equals one.

1 16. (original) The method of claim 4, wherein the data pattern comprises at least one
2 Synchronous Digital Hierarchy (SDH) frame.

1 17. (original) The method of claim 16, wherein the step of calculating comprises
2 performing a Bit Interlace Parity (BIP) calculation.

1 18. (original) The method of claim 17, wherein:
2 the data pattern comprises at least a last frame and a first frame;
3 the desired value is stored in the first frame;
4 the actual value is calculated on the last frame.

1 19. (original) The method of claim 17, wherein the data pattern comprises a plurality
2 of frames and a plurality of the plurality of frames include identical B bytes.

1 20. (original) The method of claim 18, wherein the last frame and the first frame are
2 the same frame.

1 21. (original) The method of claim 17, wherein the desired value comprises at least
2 one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

1 22. (original) The method of claim 1, further comprising:
2 calculating a second actual value using second selected data of the data
3 pattern;
4 determining a second desired value of the second-actual-value calculation
5 using the second selected data;
6 determining a second correction value to be applied to a portion of the second
7 selected data;
8 performing an operation using the second correction value and the portion of
9 the second selected data, thereby yielding a second replacement value; and
10 making the portion of the second selected data equal to the second
11 replacement value, thereby yielding adjusted second selected data.

1 23. (original) The method of claim 22, wherein the step of determining the second
2 correction value comprises performing an exclusive-Or operation of the second actual value
3 and the second desired value.

1 24. (original) The method of claim 23, wherein the step of performing the operation
2 using the second correction value comprises performing an exclusive-Or operation of the
3 second correction value and the portion of the second selected data.

1 25. (currently amended) The method of claim 24, wherein the second selected
2 data and the portion of the second selected data are mutually exclusive.

1 26. (original) The method of claim 1, wherein the selected data is selected from a
2 single frame of the data pattern.

1 27. (original) The method of claim 1, further comprising calculating an adjusted
2 actual value using the adjusted selected data, wherein the adjusted actual value equals the
3 desired value.

1 28. (original) The method of claim 1, wherein the step of determining the correction
2 value comprises performing an exclusive-Or operation of the actual value and the desired
3 value.

1 29. (original) The method of claim 1, wherein the step of performing the operation
2 comprises performing an exclusive-Or operation of the correction value and the portion of the
3 selected data.

1 30. (original) An error-rate test system comprising:
2 a pattern generator adapted to input a finite data pattern comprising at least
3 one frame to a device under test, wherein the device under test sequentially processes and
4 outputs data of the input finite data pattern;
5 wherein a correction value comprises the result of an exclusive-Or operation
6 of an actual value and a desired value of a calculation performed on a selected portion of at
7 least one frame of the finite data pattern;
8 wherein a replacement value comprises an exclusive-Or operation of the
9 correction value and a portion of the selected portion; and

10 wherein the portion of the selected portion is made equal to the replacement
11 value.

1 31. (original) The system of claim 30, wherein the data pattern comprises at least one
2 Synchronous Optical Network (SONET) frame.

1 32. (original) The system of claim 31, wherein the actual value comprises the result
2 of a Bit Interlace Parity (BIP) calculation.

1 33. (original) The system of claim 32 wherein:
2 the data pattern comprises at least a last frame and a first frame;
3 the desired value is stored in the first frame;
4 the actual value is calculated on the last frame.

1 34. (original) The system of claim 30, wherein the data pattern comprises a plurality
2 of frames and a plurality of the plurality of frames include identical B bytes.

1 35. (original) The system of claim 33, wherein the last frame and the first frame are
2 the same frame.

1 36. (original) The system of claim 30, wherein the desired value comprises at least
2 one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

1 37. (original) The system of claim 30, wherein the number of frames in the data
2 pattern equals one.

1 38. (original) The system of claim 30, wherein the data pattern comprises at least one
2 Synchronous Digital Hierarchy (SDH) frame.

1 39. (original) The system of claim 38, wherein the actual value comprises the result
2 of a Bit Interlace Parity (BIP) calculation.

1 40. (original) The system of claim 39, wherein:
2 the data pattern comprises at least a last frame and a first frame;
3 the desired value is stored in the first frame;
4 the actual value is calculated on the last frame.

1 41. (original) The system of claim 38, wherein the data pattern comprises a plurality
2 of frames and a plurality of the plurality of frames include identical B bytes.

1 42. (original) The system of claim 40, wherein the last frame and the first frame are
2 the same frame.

1 43. (original) The system of claim 30, wherein the desired value comprises at least
2 one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

1 44. (original) The system of claim 30, wherein:
2 a second actual value is calculated using a second selected portion of the at
3 least one frame;
4 a second desired value of the second-actual-value calculation is determined
5 using the second selected portion;

6 a second correction value to be applied to a portion of the second selected
7 portion is determined;

8 an operation is performed using the second correction value and the portion of
9 the second selected portion, the operation using the second correction value and the portion
10 of the second selected portion yielding a second replacement value; and

11 the portion of the second selected data is made equal to the second
12 replacement value, thereby yielding an adjusted second selected portion.

1 45. (original) The system of claim 44, wherein the determination of the second
2 correction value comprises performing an exclusive-Or operation of the second actual value
3 and the second desired value.

1 46. (original) The system of claim 45, wherein the operation using the second
2 correction value and the portion of the second selected portion comprises performing an
3 exclusive-Or operation of the second correction value and the portion of the second selected
4 portion.

1 47. (original) The system of claim 46, wherein the selected portion and the portion of
2 the second selected portion are mutually exclusive.

1 48. (original) The system of claim 30, wherein the selected portion is selected from a
2 single frame of the data pattern.

1 49. (original) The system of claim 30, wherein an adjusted actual value using the
2 adjusted selected data is calculated and the adjusted actual value equals the desired value.